

# owner's manual

Quality Uncompromised

# ROTEL<sup>®</sup>

# RC-850

STEREO CONTROL AMPLIFIER

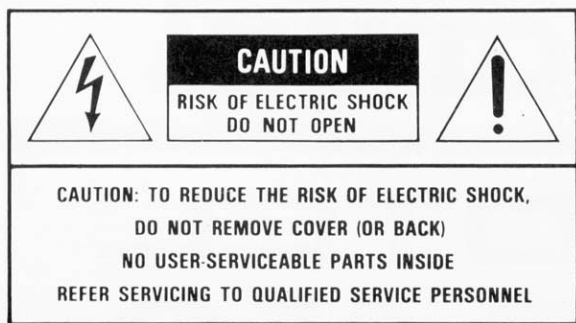
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**WARNING**  
**TO PREVENT FIRE OR SHOCK HAZARD,**  
**DO NOT EXPOSE THIS APPLIANCE TO**  
**RAIN OR MOISTURE**

Write your SERIAL NUMBER here.

The number is located near the name  
plate on the rear panel.

# SAFETY INSTRUCTIONS



## Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### EXCLUSIVE NOTE FOR U.K.

If your unit comes with a 2-core cable without a plug, make certain live and neutral leads are connected to the proper terminals. Check that the terminals are screwed down firmly and no loose strands of wire are present.

**IMPORTANT:** The wires in this mains lead are coloured in accordance with the following code:

BLUE : NEUTRAL

BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLUE or BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or colour BROWN or RED.

- 1. Read Instructions** — All the safety and operating instructions should be read before the appliance is operated.
- 2. Retain Instructions** — The safety and operating instructions should be retained for future reference.
- 3. Heed Warnings** — All warnings on the appliance and in the operating instructions should be adhered to.
- 4. Follow Instructions** — All operating and other instructions should be followed.
- 5. Water and Moisture** — The appliance should not be used near water — for example, near a bathtub, wash-bowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
- 6. Carts and Stands** — The appliance should be used only with a cart or stand that is recommended by the manufacturer.
- 7. Wall or Ceiling Mounting** — The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 8. Ventilation** — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- 9. Heat** — The appliance should be situated away from heat sources such as radiators, stoves, or other appliances that produce heat.
- 10. Power Sources** — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- 11. Power-Cord Protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- 12. Cleaning** — The appliance should be cleaned only as recommended by the manufacturer.
- 13. Nonuse Periods** — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- 14. Object and Liquid Entry** — Care should be taken so that objects do not fall into and liquids not spilled into the inside of the appliance.
- 15. Damage Requiring Service** — The appliance should be serviced by qualified service personnel when:
  - A. The power-supply cord or the plug has been damaged; or
  - B. Objects have fallen, or liquid has been spilled into the appliance; or
  - C. The appliance has been exposed to rain; or
  - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
  - E. The appliance has been dropped, or the cabinet damaged.
- 16. Servicing** — The user should not attempt to service the appliance beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.
- 17. Grounding or Polarization** — The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.

# ENGLISH

## STEREO CONTROL AMPLIFIER RC-850

### CAUTION:

TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

### INTRODUCTION

We at Rotel want to thank you for purchasing our audio product.

Rotel audio products are designed to use the latest electronic technology, and they incorporate our long experience as a specialist manufacturer of audio equipment. We are confident that you will find satisfaction in the high quality sound and top performance, and that you will find pleasure in the functional beauty achieved through human-engineering concept. Before starting operation, please read this instruction manual thoroughly and acquaint yourself with the proper mode of using the unit and all its connections.

We hope you will enjoy top-notch performance for many years to come.

### BEFORE ENJOYMENT/POWER SUPPLY

Follow the instructions below for maximum safety:

#### 1. Use a wall outlet for power supply

Be sure to connect the AC line cord to a house-hold wall outlet. Be certain that the outlet voltage matches the electrical rating of the unit, found on the rear panel name plate.

#### 2. Connecting and removing AC cord

Be sure to connect or disconnect the AC line cord only after turning off the power switch to prevent possible shock noise or damage to the speakers.

#### 3. Ventilate the unit well

Never block any ventilation holes at the top and bottom of the unit. Be sure also to provide ample ventilation space around the unit. Poor ventilation may result in damage due to excessive heat.

#### 4. Do not open the cabinet

In order to avoid electric shock or damage to the component, never open the cabinet. If a foreign object falls inside the unit by mistake, turn the power off, disconnect the wall plug, and consult a qualified electrician or your dealer.

#### 5. Installation

Be sure to place the unit in a level and flat place where it is free from humidity, vibration, high temperature and not exposed to direct sunlight. Be careful not to place the

unit in a highly enclosed place such as near a wall or on a bookshelf. A poor ventilation will cause undesirable effects to the unit.

#### 6. Moving the unit

When transporting, remove the AC cord from the wall outlet and all other connected cords on the rear panel to prevent wire breakage and short circuits.

#### 7. If the unit gets wet

If the unit should get wet, immediately disconnect the AC cord, and consult your dealer or a qualified electrician.

#### 8. Cleaning and maintenance

Do not use chemicals such as benzene or thinners on the front panel. Always use a soft, dry cloth to clean the unit.

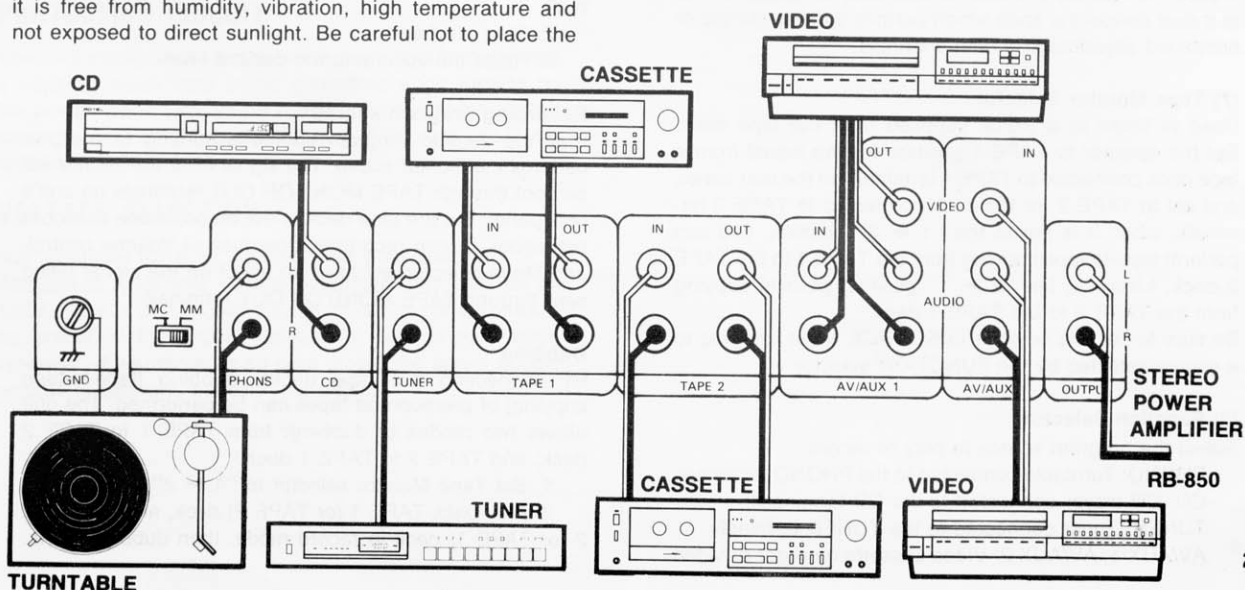
#### 9. Owner's manual

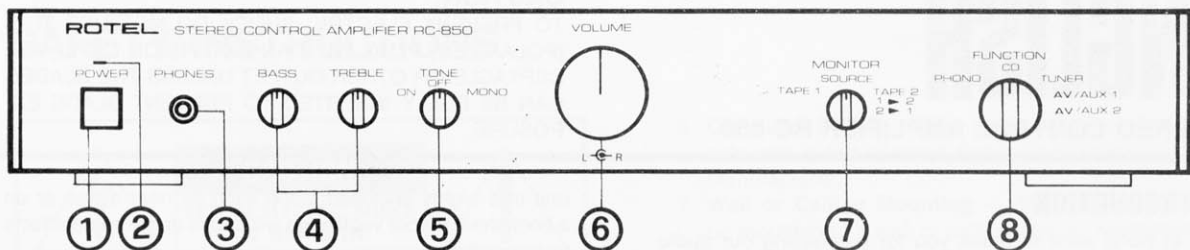
Keep the owner's manual near the unit, and record the serial number (found on the rear panel) on the cover.

Caution (applicable to the U.S.A., Canada, Hong Kong, and Southeast Asia): On the rear panel of the RC-850 are two sets of AC outlet through which power is supplied to audio equipment (turntable, CD player, tuner, cassette deck, etc.). Each AC outlet is the switched type, turned on or off upon switching on or off the power in the RC-850, and has rating of 200 watts maximum. Do not attempt to connect equipment whose power consumption exceeds the rating of these AC outlets. Never connect a power amplifier to these AC outlets.

### CONNECTING COMPONENTS

Connect all necessary audio components to the rear panel of the unit, using RCA pin cords. See the illustration for properly completed connections. When connecting RCA pin cords, be sure that L (left) and R (right) markings on each component are matched correctly. Connect the grounding wire of the turntable to the terminal marked GND on the amplifier.





## SWITCHES AND CONTROLS

### (1) Power Button

Depress this button to turn on the power in the unit. Press the button a second time to release it and to cut off the power.

### (2) Power Indicator

Glowes when power is turned on with the power button.

### (3) Headphone Jack

For private listening, plug your headphones into this jack. The volume of the headphone sound can be regulated with the volume control.

### (4) Tone Controls

Two separate tone controls regulate bass and treble respectively: knob labeled BASS is for low frequency range and TREBLE for high frequency range.

Rotate the knob clockwise to boost the response, and counterclockwise to cut it.

### (5) Tone Selector

With the selector at OFF, the signals do not pass through the tone control circuit (in order to prevent deterioration of the tone quality). Therefore the tone controls do not function, but this unit provides superior tone quality. If the listening room acoustics are extremely lively or dead and no adjustment is possible by rearranging the furnitures or the speakers, set this selector to ON. You can then adjust the tone with the tone controls.

At the MONO position, all the signals are output in mono, and the tone controls are active.

### (6) Volume Control

Used to regulate the volume level. Turn clockwise to increase the volume, and counterclockwise to reduce it. This is a dual concentric knob which permits either separate or combined adjustment of both channels.

### (7) Tape Monitor Selector

Used to listen to a signal supplied from the tape deck. Set the selector to TAPE 1 position for the signal from a tape deck connected to TAPE 1 terminals on the rear panel, and set to TAPE 2 for the deck connected to TAPE 2 terminals. When it is set to the "1 ► 2" position, you can perform tape-to-tape copying from the TAPE 1 to the TAPE 2 deck. Likewise, the "2 ► 1" position permits copying from the TAPE 2 to the TAPE 1 deck.

Be sure to set this selector to SOURCE when listening to a source selected by the FUNCTION selector.

### (8) Function Selector

Select the program source to play or record.

PHONO: Turntable connected to the PHONO terminals.

CD: CD player connected to the CD terminals.

TUNER: Tuner connected to the TUNER terminals.

AV/AUX 1, AV/AUX 2: Video cassette recorder or video

disc recorder connected to the AV/AUX 1 or AV/AUX 2 terminals. Use this selector with the Tape Monitor selector at the SOURCE position.

## OPERATION

- Before commencing operation, check to see if all connections are properly made.

- Always be sure to set the volume control to the minimum position before turning on power.

### Turntable Listening

1. Set the Tape Monitor Control in SOURCE position.
2. Select PHONO on the function selector.
3. Start the play, then raise the volume.

### Phono MM/MC Selector

The unit has a built-in MC head amplifier. This selector is used to receive MM (moving magnet) or MC (moving coil) phono cartridge signal with an appropriate gain. In MC position, the built-in MC head amplifier is activated. When your turntable uses an MC cartridge, set the selector to MC position. When MM cartridge is used, set the selector to MM position.

### Listening from compact disc player or tuner

1. Set Tape Monitor selector to source.
2. To listen to a compact disc, set the Input selector to the CD position; set it to the TUNER position to listen to radio broadcasts.
3. Play the compact disc or tune in to the desired station, according to instructions given for the equipment.
4. Raise the volume to the desired level.

### Playing back tape deck

1. Set Tape Monitor selector to TAPE 1 or TAPE 2 position according to the tape deck you are going to play back.
2. Start playback.
3. Raise the volume to the desired level.

### Recording program source

Play the desired program source according to the procedures mentioned above. The signal from the source will be sent through TAPE MONITOR OUT terminals on unit's rear panel. Put the tape deck in the record mode to record the signal. During recording, operation of Volume control, and Mode selector will have no effect on the signal being sent through TAPE MONITOR OUT terminals.

### Dubbing

By connecting two tape decks, dubbing (tape-to-tape copying) of prerecorded tapes can be performed. The unit allows two modes of dubbing: from TAPE 1 to TAPE 2 deck, and TAPE 2 to TAPE 1 deck.

1. Set Tape Monitor selector to "1 ► 2" or "2 ► 1".
2. Play back TAPE 1 (or TAPE 2) deck, and put TAPE 2 (or TAPE 1) deck in record mode, then dubbing starts.

During this operation, you can listen to the signal with Volume control or Mode selector set as desired; they have no effect on the signal to be recorded.

### Playback and Recording With AV Equipment

The RC-850 permits connection and switching of audiovisual components, so that the amplifier can be used as an AV control center.

There are one set of inputs for a stereo AV component such as a video disc player and one set of inputs/outputs for a stereo video recorder.

This system then not only provides for easy selection of video sources, but also allows high performance operation for optimal sound quality such as digital sound from a Hi-Fi video recorder.

In addition, sound trace of video components can be dubbed onto a tape recorder connected to the amplifier, or vice versa. Video dubbing is also possible from AV/AUX 2 to AV/AUX 1.

### Playback

To carry out playback with the equipment connected to the AV/AUX inputs, set the function selector to AV/AUX 1 or AV/AUX 2 as required and set the tape monitor selector to SOURCE position.

Adjust the volume and other controls on the amplifier to suit your needs.

### Recording (Dubbing)

Set the tape monitor selector to SOURCE position and function selector to AV/AUX 2, where the source to be recorded is connected.

Then record with the video recorder connected to the AV/AUX 1 terminals on the rear panel.

## HUM AND NOISE

In any high fidelity installation, hum may be caused by the interconnection of a turntable, tuner and amplifier, and speakers as the result of wiring, different grounding or location of components.

Before commencing operation, be absolutely sure that connection between each component is properly made, and each RCA pin jack is securely inserted.

Since noise from fluorescent lamps or thermostats may be picked up, the location of the audio system should be carefully selected. In case you cannot locate the cause of noise, consult your dealer.

## PROTECTION CIRCUIT

The unit incorporates a protection relay circuit to prevent a popping noise from being generated upon turning on the power. Upon turn-on, no sound is produced for several seconds. This is for the stabilization of the unit and is not an abnormal operation.

## VOLTAGE SELECTION

### Not available for U.K., Canada and Scandinavia

The unit is a variable voltage equipment that can run on 120V, 220V or 240V power supply. Your unit should already be preset at the proper voltage for use in your area. However, if you move to an area where the power supply voltage is different, consult your dealer.

## SPECIFICATIONS

Total Harmonic Distortion (20 to 20,000 Hz) CD/TUNER	No more than 0.004% (Rated output)
Intermodulation Distortion (60 Hz : 7 kHz = 4:1) CD/TUNER	No more than 0.004% (Rated output)
Output (Headphone)	4 to 16 ohms
Input Sensitivity/Impedance:	
PHONO (MM)	2.5 mV/47 kohms
PHONO (MC)	260 $\mu$ V/180 ohms
CD	150 mv/24 kohms
TUNER, TAPE 1,2	150mV/24 kohms
AV/AUX 1,2	150mv/24 kohms
Output Sensitivity/Impedance	1.0 V/1.2 kohms
Overload Level (T.H.D. 0.5%, 1 kHz):	
PHONO (MM)	180 mV
PHONO (MC)	20 mV
CD, TUNER, TAPE 1,2	5V
AV/AUX 1,2	5V
Frequency Response:	
PHONO	40 to 100,000 Hz, $\pm$ 0.2 dB (RIAA STD)
CD, TUNER, TAPE 1,2	4 to 100,000 Hz, +0dB, -3dB
AV/AUX 1,2	4 to 100,000 Hz, + 0dB, -3dB
Signal-to-Noise Ratio (IHF, A network):	
PHONO (MM)	78 dB
PHONO (MC)	64 dB
CD, TUNER, TAPE 1,2	95 dB
AV/AUX 1,2	95 dB
Power Consumption	10 watts
Dimensions (overall)	444(W) $\times$ 66(H) $\times$ 283(D)mm 17 $\frac{1}{2}$ " $\times$ 2 $\frac{19}{32}$ " $\times$ 11 $\frac{5}{32}$ "
Weight (net)	4.0kg/8.8 lbs

- Specifications and design subject to possible modification without notice.